NEMA Standards Publication

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American National Standard for Electrical Rigid Aluminum Conduit (ERAC)

National Electrical Manufacturers Association

National Electrical Manufacturers Association
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ANSI C80.5-2005

American National Standard

for Electrical Rigid Aluminum Conduit (ERAC)

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Revision of
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American National Standard

For Electrical Rigid Aluminum Conduit (ERAC)

Secretariat:

National Electrical Manufacturers Association

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Contents

Tables

Foreword (This Foreword is not part of American National Standard C80.5-2005.)

This standard was developed by the Accredited Standards Committee on Raceways for Electrical Wiring Systems, C80. The objective of the committee is to produce a comprehensive specification that would establish uniform dimensions and standard construction requirements for Electrical Rigid Steel Conduit, Steel Electrical Metallic Tubing, Electrical Intermediate Metal Conduit and Electrical Aluminum Rigid Conduit raceway products and their associated components.

The standard was originally approved in 1950 and revised in 1953, 1959, 1963, 1966, 1977, 1983, 1990, 1994 and 2005.

Suggestions for improvement of this standard will be welcome. They should be sent to:

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This standard was processed and approved for submittal to ANSI by the Accredited Standards Committee on Raceways for Electrical Wiring Systems, C80. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the C80 Committee had the following members:

J. A. Gruber, Chairman
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For Electrical Rigid Aluminum Conduit (ERAC)—

1 Scope

This standard covers the requirements for porthole-extruded aluminum-alloy conduit for use as a raceway for the wires or cables of an electrical system. The finished conduit is produced in nominal 10 ft. (3.05 m) lengths, threaded on each end with one coupling attached.

This standard also covers aluminum conduit couplings, elbows, nipples and conduit lengths other than 10 ft (3.05 m).

Properly assembled systems of conduit, couplings, elbows and nipples manufactured in accordance with this standard, and other identified fittings, provide for the electrical continuity required of an equipment grounding conductor.

2 Normative References

The following standard contains provisions which, through reference in this text, constitute requirements of this American National Standard. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below.

ANSI/ASME B1.20.1, *Pipe Threads, General Purpose (Inch)*

UL 6A, *Electrical Rigid Metal Conduit – Aluminum, Red Brass and Stainless Steel*

3 Definitions

3.1 electrical rigid aluminum conduit (ERAC): A threadable aluminum raceway of circular cross-section designed for the physical protection and routing of wire conductors and cables and for use as an equipment grounding conductor.

3.2 threaded coupling: An internally threaded aluminum cylinder for joining together the components of an ERAC system.

3.3 elbow: A manufactured curved section of ERAC threaded on each end.

3.4 nipple: A straight length of ERAC not more than 2 ft (0.61 m) long and threaded on each end.

3.5 straight conduit: A straight length of ERAC without a coupling.

3.6 finished conduit: A straight length of ERAC with one coupling attached.